Product Ecology for the Elicitation of Requirements

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About me

What, a tester?

Testing is an empirical, technical investigation conducted to provide stakeholders with information about the quality of the product under test.

- Cem Kaner
Myth

Testing depends on documented requirements.

There is value in a high quality requirements document but it is often not available or maintained.
Problem

The context of the product is unclear.
A complex system

What factors influence the product and how?
What factors are influenced by the product and how?
Understanding one side of the interaction tells you little about the quality of the interaction.
Product Ecology method

Making the complex clear by

1. making the invisible visible
   creating a diagram

2. applying heuristics
   to discover structures
A pacemaker for the brain

- A Deep Brain Stimulation system that features an advanced DBS lead with 40 individual stimulation points
- This advanced system is designed to allow more precise stimulation of the intended target in the brain and may potentially result in reduced procedure time and fewer stimulation-induced side effects
Who are the stakeholders?
Making the invisible visible

Clarifies the relationships existing between the parts of the whole.
A lighting system for car parks

- Design a lighting system for car parks that consumes less energy than current systems
- Don't compromise on comfort feelings and safety
- ROI <= 2 years
What is a heuristic?

A fallible method of solving a problem.
Simple rules and shortcuts, comprehensive procedures, or even sophisticated software tools.

Fallibility implies that wisdom and responsibility are critical.

From Reinventing Testers by James and Jon Bach
Heuristics

Producer, Market, Consumer

Problem, Solution
What is the problem that we are trying to solve?
What is our solution to the problem?
What other solutions were proposed or evaluated?

Product, People, Process
What are the elements of the product?
How are the people organized? Project? Departments?
What does the product development process look like?
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Heuristics

Supply/Value Chain

Product Life-cycle

User Scenarios
Prevention and recovery of RSI

- Workrave is a program that assists in the recovery and prevention of Repetitive Strain Injury (RSI)
- The program frequently alerts you to take micro-pauses, rest breaks and restricts you to your daily limit
Product Ecology method

Making the complex clear by

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   to discover structures
A new situation might require a change of representation. (Re)structure, dual-task effect.
Heuristics

Problem, Solution
Producer, Market, Consumer
Product, People, Process

Supply/Value Chain
Product Life-cycle
User Scenarios
Requirements identification

Quality is in the relationships between the product and its environment

Holistic; more than operational context

Social impact; more than technological impact
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